

# ACR – A Flexible and Inexpensive Alternative to Multiple PCI Cards

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San Jose January 23-24, 2001



Taipei February 14-15, 2001

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# Agenda

- Introduction
- ACR.Basic application
- ACR.Lite application
- ACR.Hub application
- ACR.Plus application
- Conclusion

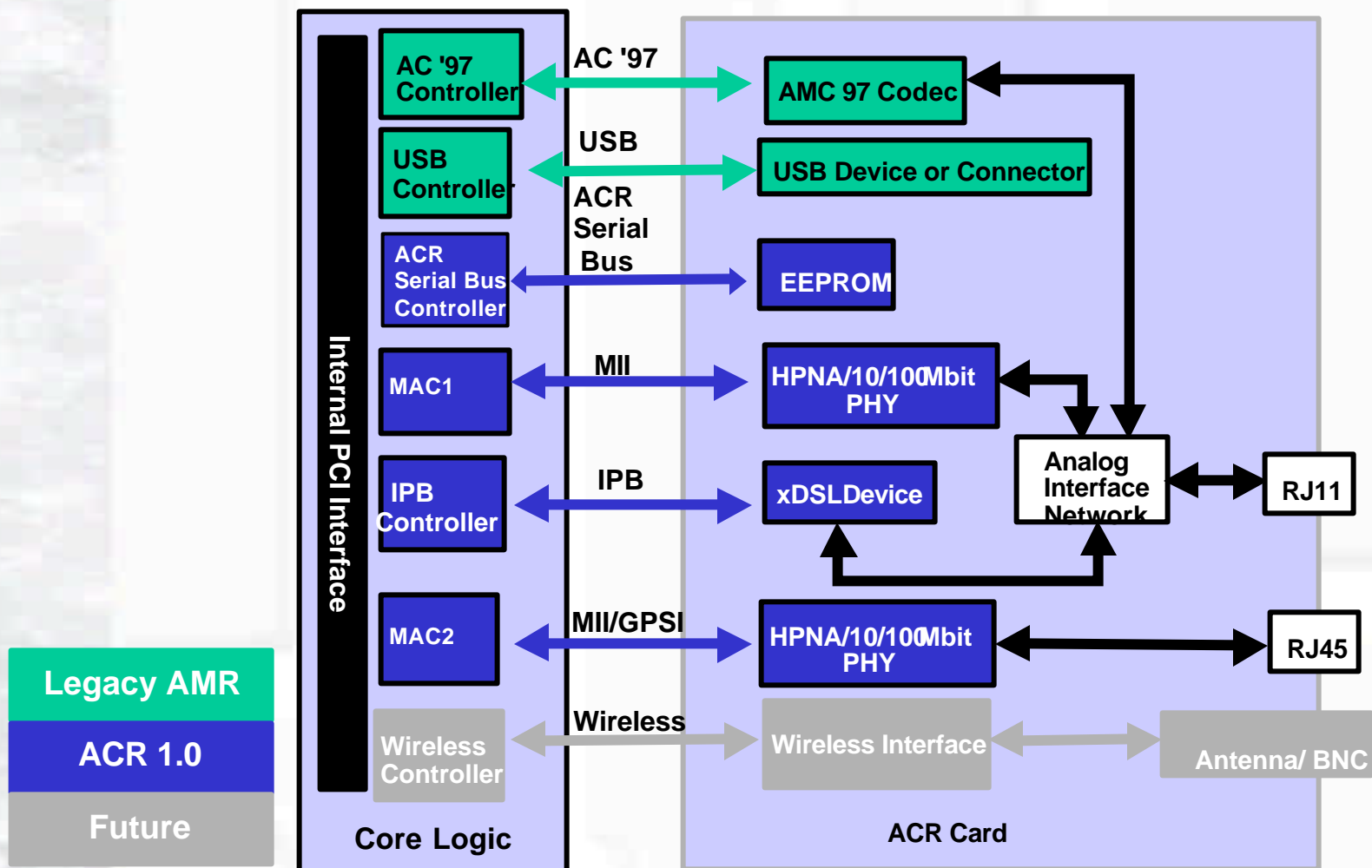
# Introduction – Why?

- The Internet is the driving force for PC demand
- Many users are adding a second PC in the home
- User's expect more features in the PC
- PC profit margins are shrinking
- PC's are shrinking
- The ACR standard offers a high performance, low cost alternative to multiple PCI cards

# Introduction – What is it?

- ACR – Advanced Communication Riser
- Standard for the motherboard connector, riser card form factor, and signal definition
- Enables high quality/low cost audio, modem, LAN, broadband and other peripherals
- Defined and driven by a consortium of over 50 companies; open to new members
- Information available at: [www.acrsig.org](http://www.acrsig.org)
- Managed by Vital Technical Marketing, Inc. - [www.vtm-inc.com](http://www.vtm-inc.com)

# Introduction – ACR Architecture

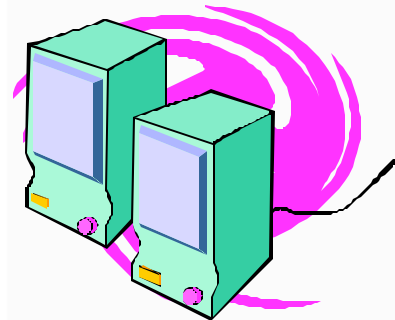


# Introduction – Benefits

- Open standard
- Better memory and bus priority than PCI
- More functions than other riser standards
- Easier to logo than AMR
- Smaller size, power, and cost

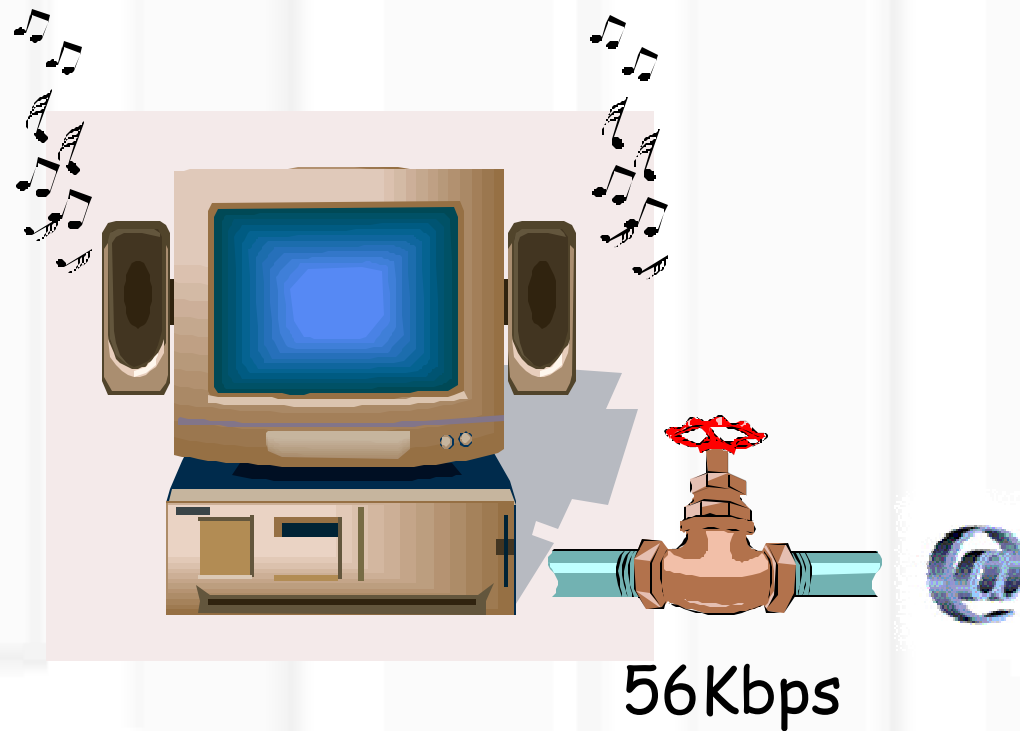
# ACR.Basic – Yesterday's Minimum Requirement

- Basic = AC'Link audio + modem
- Audio (e.g. MP3/Wave) and V.92 Internet access are yesterday's minimum requirements

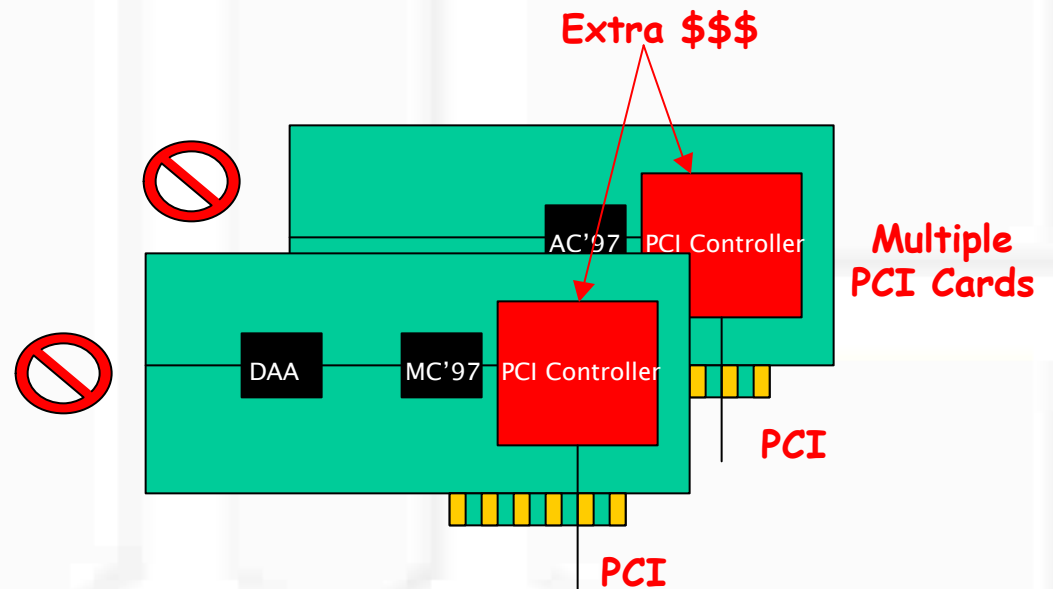
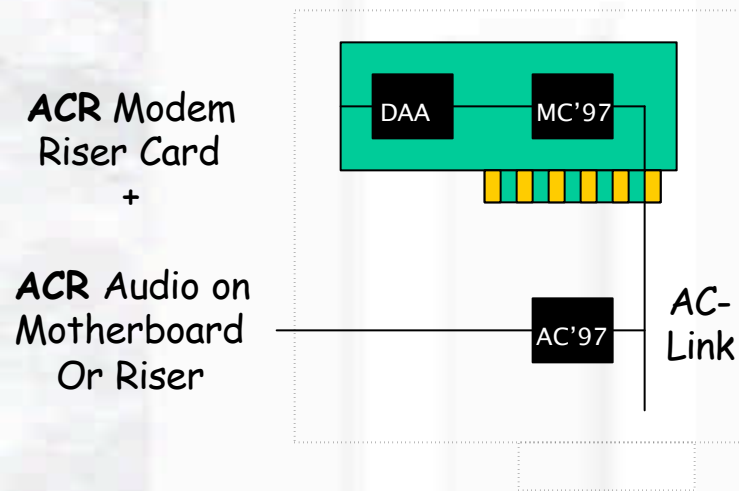




# ACR.Basic – Audio + Modem

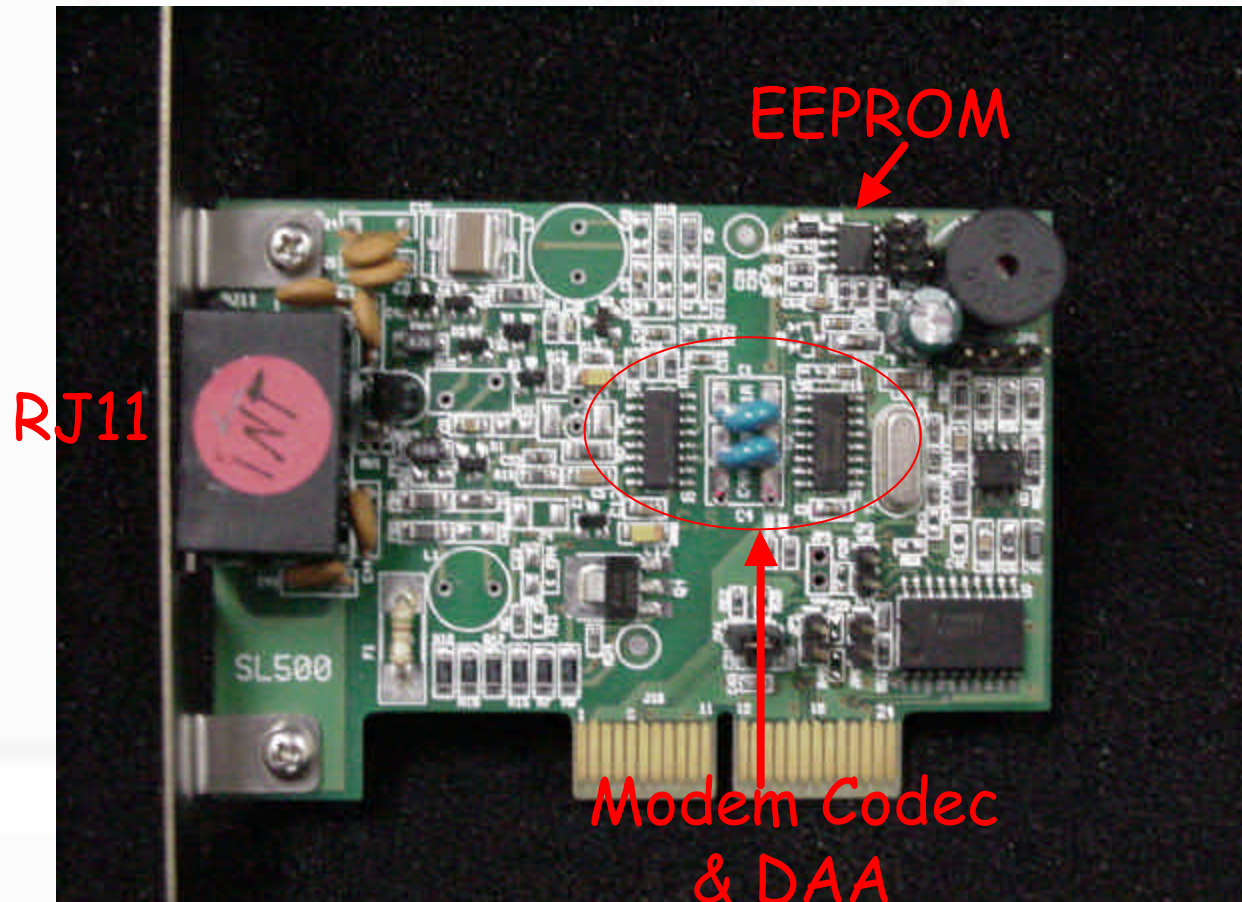


# ACR.Basic – ACR vs. PCI



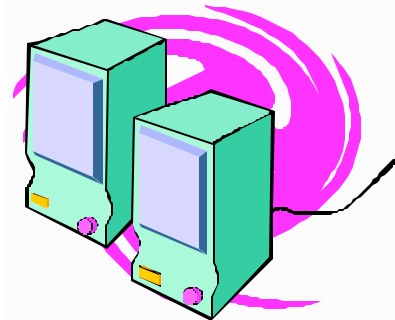
# ACR.Basic – Sample Card

## Smart Link V.92 ACR Modem

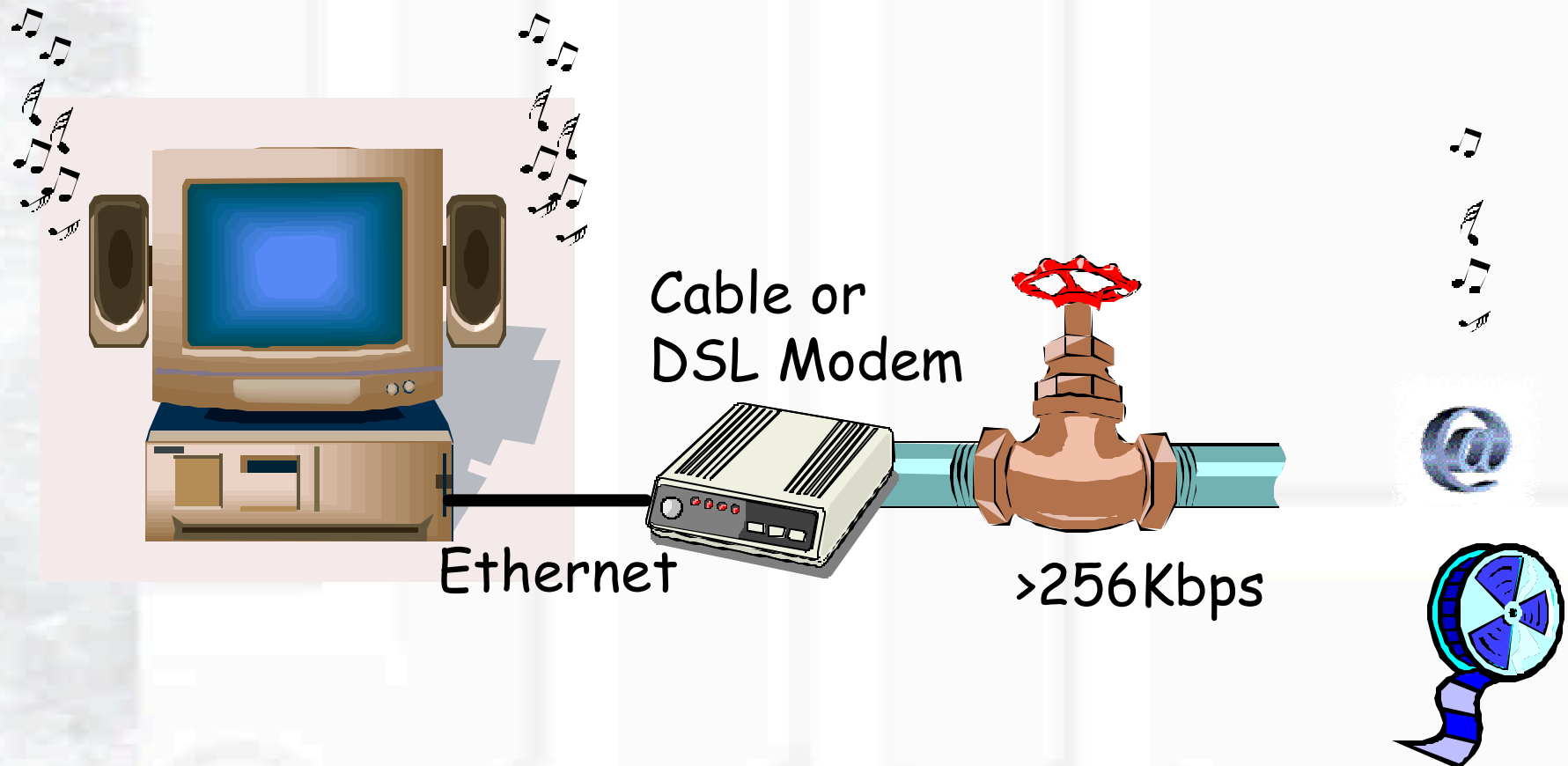


# ACR.Lite – Today's Minimum Requirement

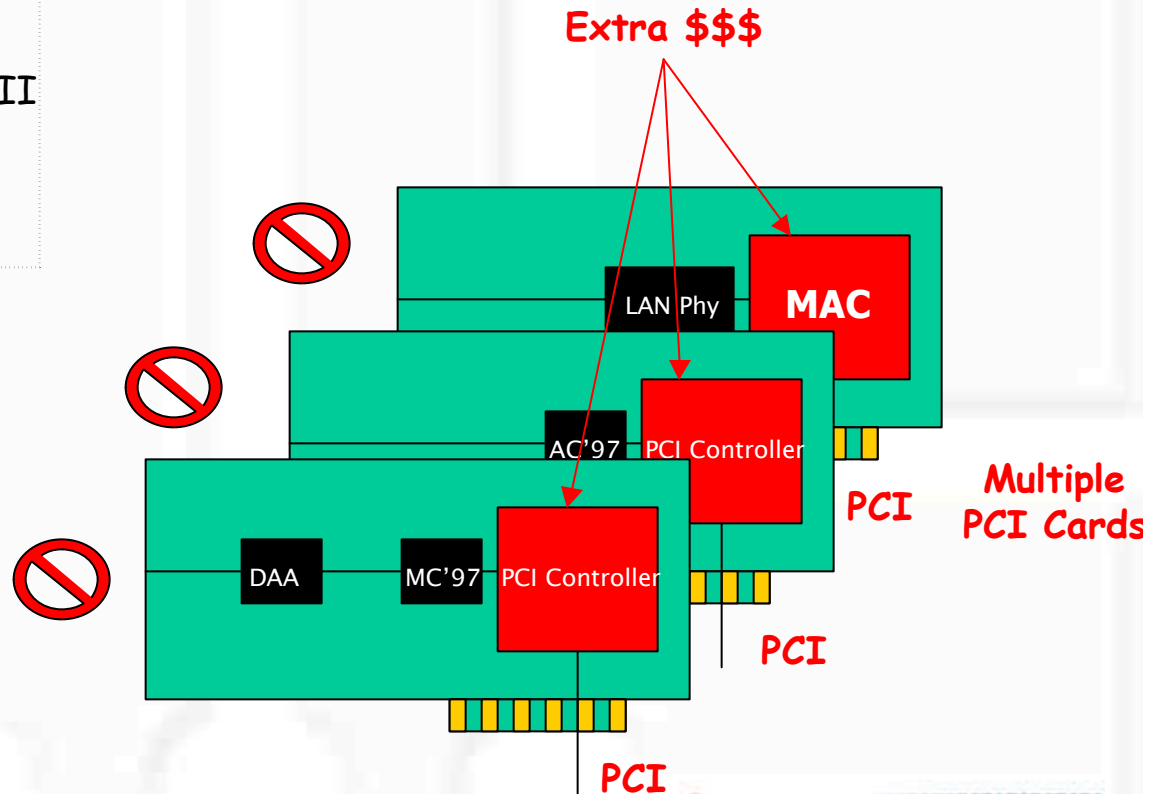
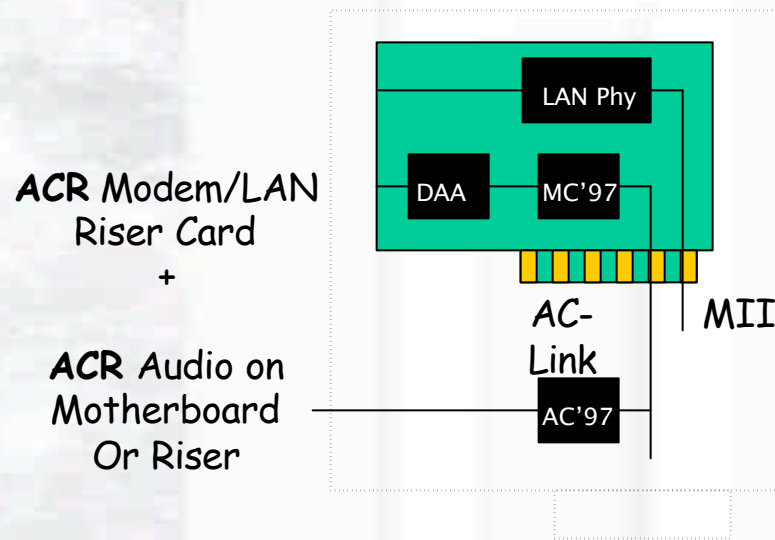
- Lite = Basic + 1 LAN I/F
- People want more bandwidth - Infotainment
- Broadband access modem (ADSL and Cable modem) is connected to PC via Ethernet
- LAN I/F = Broadband Ready!
- LAN I/F is also required for business PC's



# ACR.Lite – Audio + Modem + External Broadband



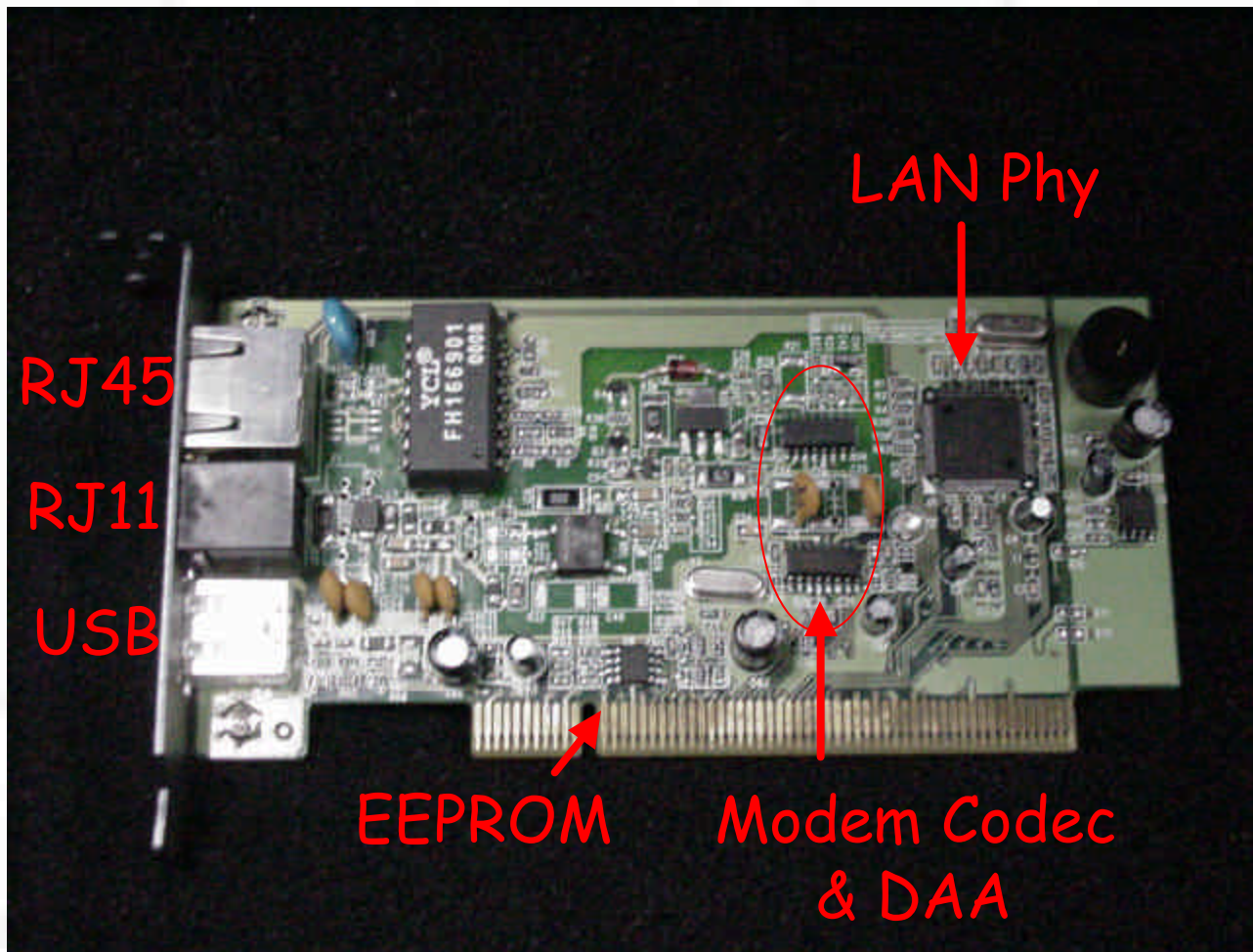
# ACR.Lite – ACR vs. PCI





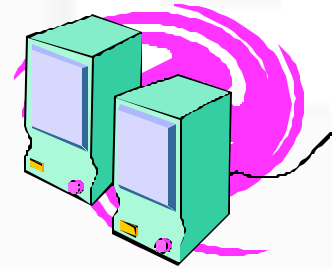
# ACR.Lite – Sample Card

## Well Communications V.92 ACR Modem + LAN + USB



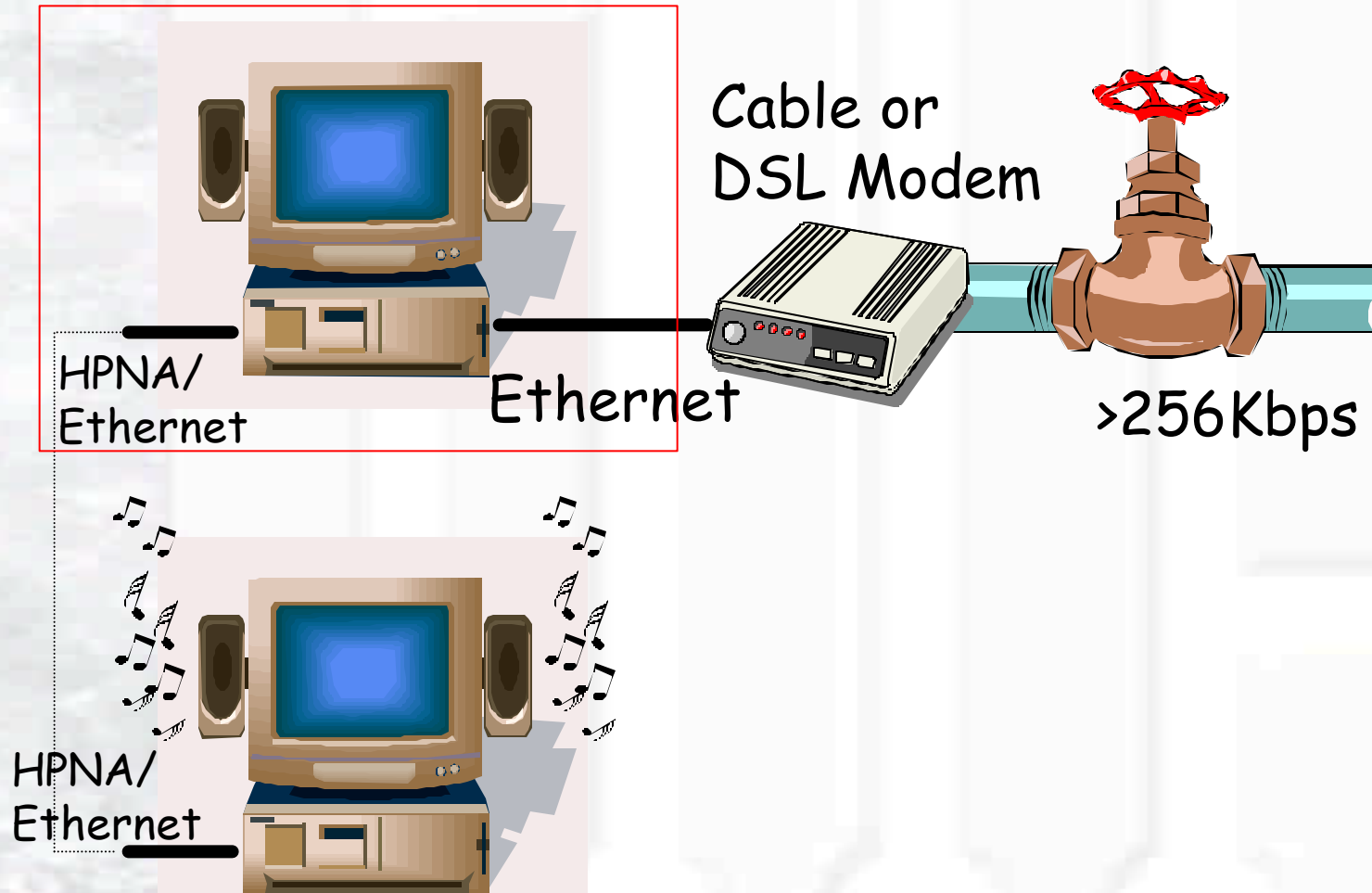
# ACR.Hub – A Low Cost Gateway

- Hub = Lite + 2<sup>nd</sup> LAN I/F
- Second LAN I/F is used to network multiple PC's in the home or office
- Can be used for HomePNA or traditional LAN
- Enables Internet sharing

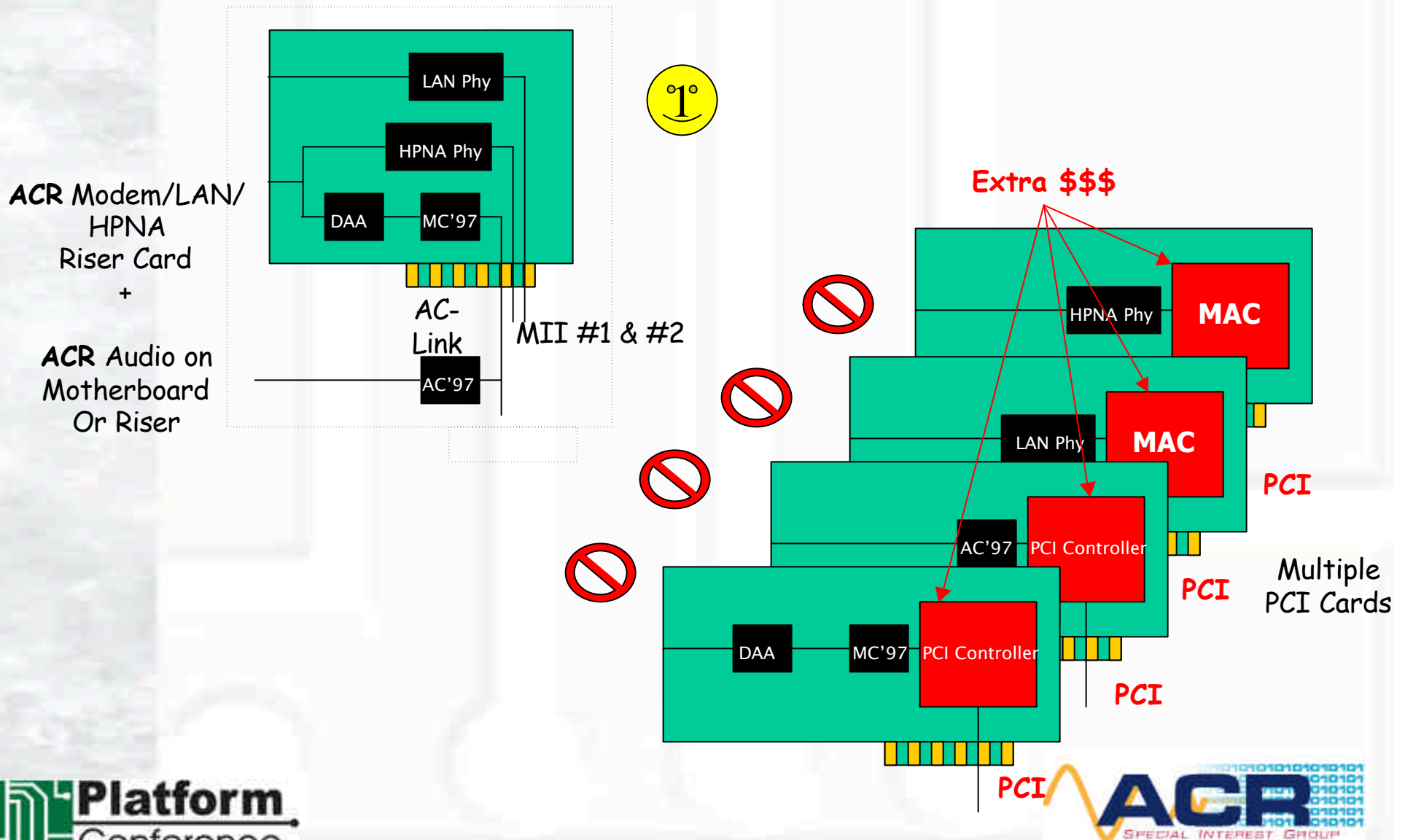




# ACR.Hub – Audio + Modem + External Broadband + HPNA

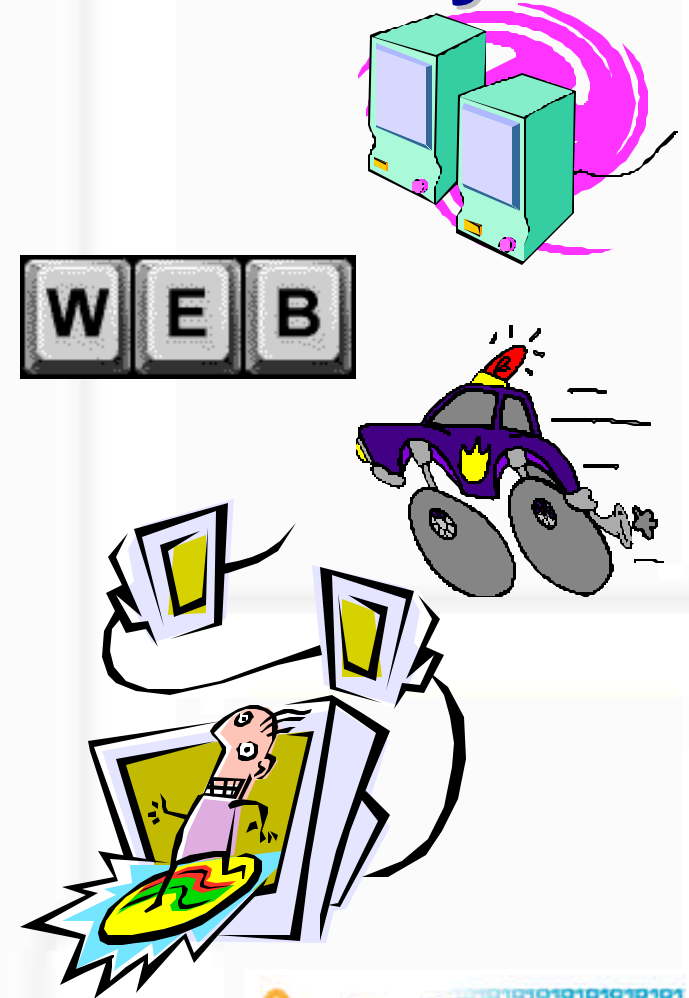


# ACR.Hub – ACR vs. PCI

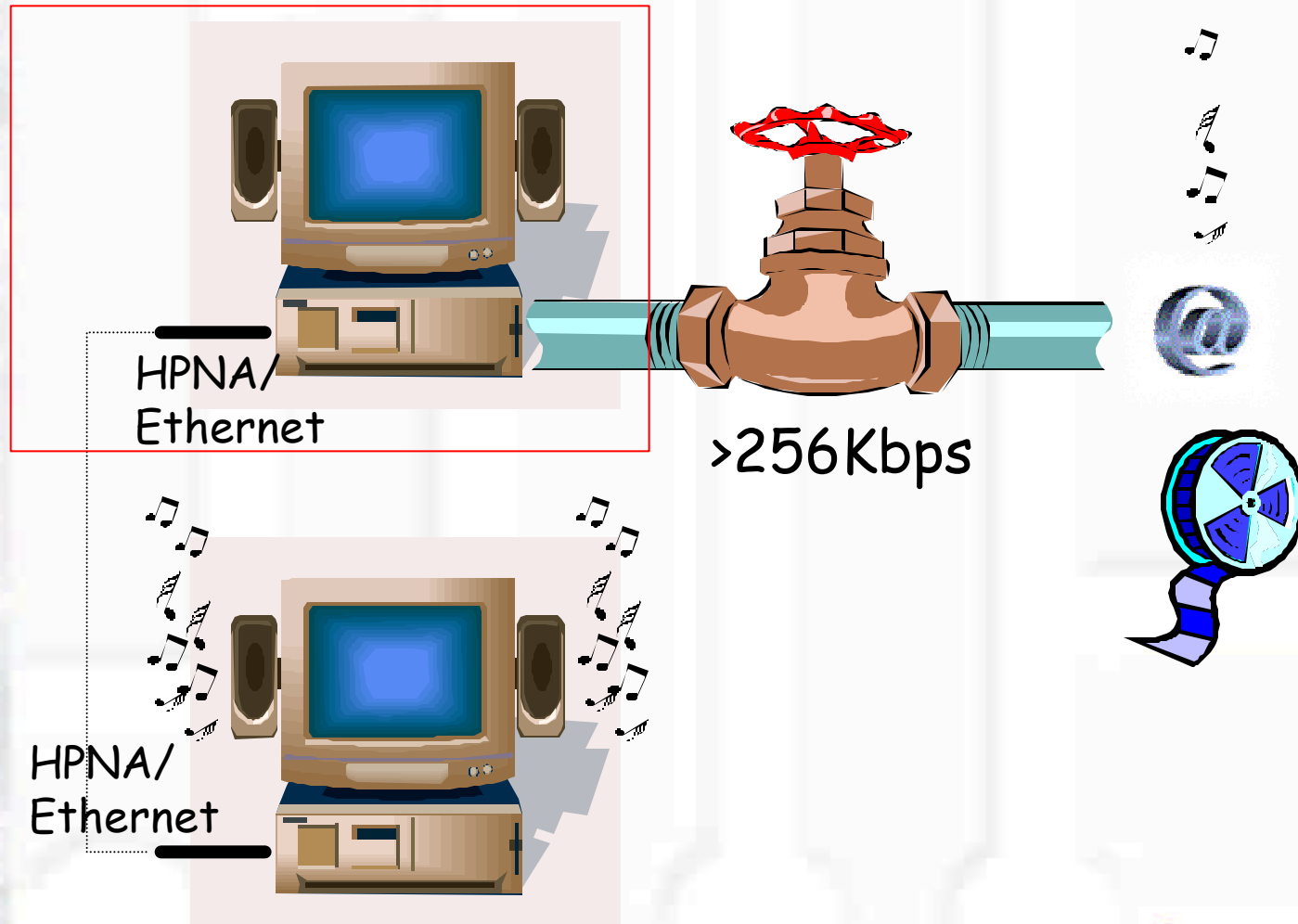


# ACR.Plus – A Highly Integrated, Low Cost Gateway

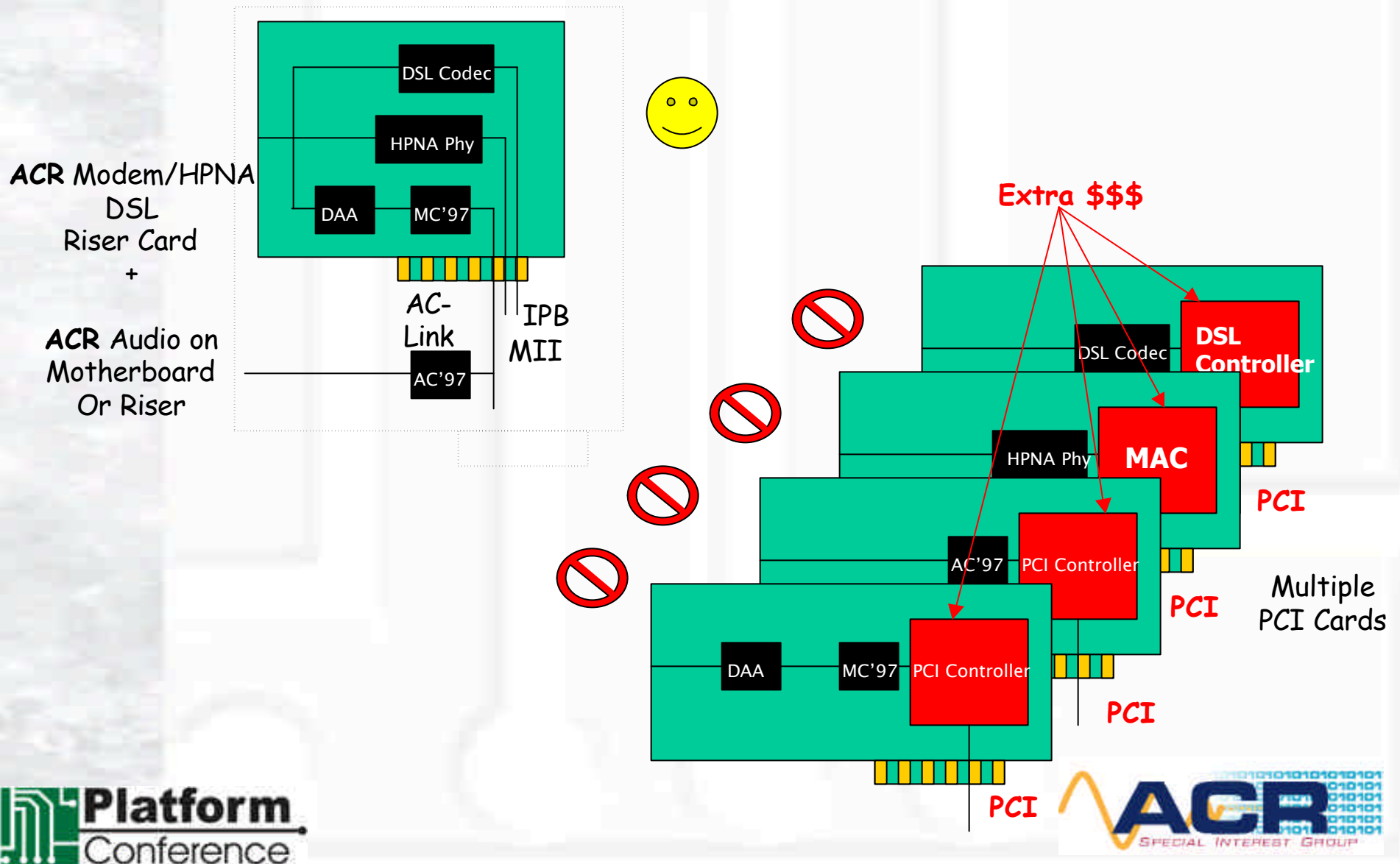
- Extreme = Hub + DSL Codec I/F (IPB)
- IPB enables lowest cost internal DSL modem



# ACR.Plus – Audio + Modem + Internal DSL + HPNA



# ACR.Plus – ACR vs. PCI



# Conclusion

- Consumers are demanding Broadband Communications, Internet Sharing, and High Quality Audio all at a low cost
- Controllers in the Super Southbridge chips enable low cost ACR riser cards for audio, modem, LAN, HPNA and DSL – **No Need for Multiple PCI Cards!!!**
- Reducing the chip count reduces cost, size and power consumption